COPY FOR IB

PCT/KR2004/001528

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Artcle 36 and Rule 70)

REC'D 28 DEC 2005
WIPO PCT

Applicant's or agent's file reference PCT04013	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. **PCT/KR2004/001528**	International filing date *(day/month/year)* **24 JUNE 2004 (24.06.2004)**	Priority date *(day/month/year)* 22 AUGUST 2003 (22.08.2003)

International Patent Classification (IPC) or national classification and IPC

IPC7 E04H 13/00

Applicant

ARUMDAUN DONG SAN CO., LTD. et al

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☒ (sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:
      ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:
   - ☒ Box No. I Basis of the report
   - ☐ Box No. II Priority
   - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - ☐ Box No. IV Lack of unity of invention
   - ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - ☐ Box No. VI Certain documents cited
   - ☐ Box No. VII Certain defects in the international application
   - ☐ Box No. VIII Certain observations on the international application

Date of submission of the demamd	Date of completion of this report
20 JUNE 2005 (20.06.2005)	13 DECEMBER 2005 (13.12.2005)
Name and mailing address of the IPEA/KR Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer KIM, Hyun Woo Telephone No. 82-42-481-5795

Form PCT/IPEA/409 (cover sheet) (April 2005)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/KR2004/001528

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

☐ international search (under Rules 12.3 and 23.1(b))
☐ publication of the international application (under Rule 12.4)
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this reort as "originally filed" and are not annexed to this report):*

☐ the international application as originally filed/furnished

☐ the description:
pages _____ as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☒ the claims:
pages _____ as originally filed/furnished
pages* 16-19 as amended (together with any statment) under Article 19
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☐ the drawings:
pages _____ as originally filed/furnished
pages* _____ received by this Authority on _____
pages* _____ received by this Authority on _____

☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

☐ the description, pages _____
☒ the claims, Nos. 2,10
☐ the drawings, sheets _____
☐ the sequence listing *(specify)* : _____
☐ any table(s) related to sequence listing *(specify)* : _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____
☐ the claims, Nos. _____
☐ the drawings, sheets _____
☐ the sequence listing *(specify)*: _____
☐ any table(s) related to sequence listing *(specify)* : _____

** If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/KR2004/001528

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-15	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-15	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims	NONE	NO

2. Citations and explanations (Rule 70.7)

Reference is made to the following documents:

D1: KR 10-2002-0095531 A (YANG, BANG UN) 27 December 2002
D2: KR 2001-256395 Y (JU, YEONG HO) 22 November 2001
D3: KR 2000-16629 U (JEONG, HO SUN) 25 September 2000
D4: US 3940894 A (ABNER H. NUNES) 02 March 1976

1. Novelty

Claim 1 of the present application relates to a chest of cinerary urns comprising: a chest body having a plurality of urn receiving spaces each of which is open at a front side thereof to allow a cinerary urn to be placed in the urn receiving space, each of the cinerary urns storing cremated remains, and a plurality of cover plates detachably attached to the chest body at positions corresponding to the urn receiving spaces, respectively, to cover respective front sides of the urn receiving space. The chest further comprises: seal members each of which is interposed between a portion of the chest body around an associated one of the urn receiving spaces and the cover plate corresponding to the associated urn receiving space; hollow inlet members each of which is protruded from a portion of a rear wall of the chest body corresponding to an associated one of the urn receiving spaces, each of the inlet members communicating with the associated urn receiving space; valve mounting members each of which is coupled to an associated one of the inlet members; and injection valves each of which is fitted in an associated one of the valve mounting members, and centrally provided with an injection hole to allow gas to be injected through the injection hole into the associated inlet member.

(Continued on Supplemental Sheet.)

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Box V.

Each of said injection valves comprises: a hollow valve body tightly fitted in the associated valve mounting member, the valve body being provided, at one side thereof, with a tube fitting hole and being provided, at the other side thereof, with a gas inlet communicating with the associated inlet member; a valve seat hole formed at the valve body between the tube fitting hole and the gas inlet, the valve seat hole having a frustoconical cross-section having an area gradually increasing as the valve seat hole extends from the tube fitting hole to the gas inlet; a valve stem arranged in a gas passage defined in the valve body between the gas inlet and the valve seat hole to extend through the valve seat hole while being movable along the gas passage, the valve stem having a cross-section conforming to the cross-section of the valve seat hole; a pressing protrusion extending from one end of the valve stem to the tube fitting hole; and a spring arranged in the gas passage to elastically support the other end of the valve stem.

Claim 1 is the same as D1 to D4 in injecting gas into cinerary urns and maintaining the vacuum, but differs from said documents in the inlet members each of which is protrudingly formed, and in the valve mounting members each of which the injection valve is fitted in. Therefore, the subject matter of claim 1 is considered to be novel.

Since claims 3 to 8 are dependent on claim 1, the subject matter of claims 3 to 8 is also considered to be novel.

Claim 9 of the present application relates to a cinerary urn chest comprising a chest body having an urn receiving space open at a front side thereof to allow a cinerary urn to be placed in the urn receiving space, the cinerary urn storing cremated remains, and a cover plate detachably attached to the chest body at a position corresponding to the urn receiving space to cover the front side of the urn receiving space. The chest further comprises: a seal member interposed between a portion of the chest body around the urn receiving space and the cover plate; a hollow inlet member protruded from a portion of a rear wall of the chest body while communicating with the urn receiving space; a valve mounting member coupled to the inlet member; and an injection valve fitted in the valve mounting member, and centrally provided with an injection hole to allow gas to be injected through the injection hole into the inlet member.

(Continued on the next page.)

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Previous page.

Said injection valve of claim 9 comprises: a hollow valve body tightly fitted in the valve mounting member, the valve body being provided, at one side thereof, with a tube fitting hole and being provided, at the other side thereof, with a gas inlet communicating with the inlet member; a valve seat hole formed at the valve body between the tube fitting hole and the gas inlet, the valve seat hole having a frustoconical cross-section having an area gradually increasing as the valve seat

hole extends from the tube fitting hole to the gas inlet; a valve stem arranged in a gas passage defined in the valve body between the gas inlet and the valve seat hole to extend through the valve seat hole while being movable along the gas passage, the valve stem having a cross-section conforming to the cross-section of the valve seat hole; a pressing protrusion extending from one end of the valve stem into the tube fitting hole; and a spring arranged in the gas passage to elastically support the other end of the valve stem.

Claim 9 is the same as D1 to D4 in injecting gas into cinerary urns and maintaining the vacuum, but differs from said documents in the inlet member which is protrudingly formed, and in the valve mounting member in which the injection valve is fitted. Therefore, the subject matter of claim 9 is considered to be novel.

Since claims 11 to 15 are dependent on claim 9, the subject matter of claims 11 to 15 is considered to be novel.

2. Inventive Step

Claim 1 is the same as the prior art in injecting gas into cinerary urns and maintaining the vacuum, but differs from the prior art in the inlet members each of which is protrudingly formed, and in the mounting members each of which the injection valve is fitted in. The difference in said technical features leads the invention of claim 1 to have an effect for facilitating injection of gas, and the simple structure of the invention of claim 1 produces an economic effect. Therefore, the subject matter of claim 1 is considered to involve an inventive step.

Since claims 3 to 8 are dependent on claim 1, the subject matter of claims 3 to 8 is also considered to involve an inventive step.

(Continued on the next page.)

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:

Previous page.

Claim 9 is the same as the prior art in injecting gas into cinerary urns and maintaining the vacuum, but differs from the prior art in the inlet member which is protrudiingly formed, and in the valve mounting member in which the inject valve is fitted. The difference in said technical features leads the invention of claim 9 to have an effect for facilitating injection of gas, and the simple structure of the invention of claim 9 produces an economic effect. Therefore, the subject matter of claim 9 is considered to involve an inventive step.

Since claims 11 to 15 are dependent on claim 9, the subject matter of claims 11 to 15 is also considered to involve an inventive step.

Claims

1. A chest of cinerary urns comprising a chest body having a plurality of urn receiving spaces each being open at a front side thereof to allow a cinerary urn to be placed in the urn receiving space, each of the cinerary urns storing cremated remains, and a plurality of cover plates detachably attached to the chest body at positions corresponding to the urn receiving spaces, respectively, to cover respective front sides of the urn receiving spaces, the chest further comprising:

seal members each interposed between a portion of the chest body around an associated one of the urn receiving spaces and the cover plate corresponding to the associated urn receiving space;

hollow inlet members each protruded from a portion of a rear wall of the chest body corresponding to an associated one of the urn receiving spaces, each of the inlet members communicating with the associated urn receiving space;

valve mounting members each coupled to an associated one of the inlet members; and

injection valves each fitted in an associated one of the valve mounting members, and centrally provided with an injection hole to allow gas to be injected through the injection hole into the associated inlet member;

wherein each of the injection valves comprising:

a hollow valve body tightly fitted in the associated valve mounting member, the valve body being provided, at one side thereof, with a tube fitting hole while being provided, at the other side thereof, with a gas inlet communicating with the associated inlet member;

a valve seat hole formed at the valve body between the tube fitting hole and the gas inlet, the valve seat hole having a frustoconical cross-section having an area gradually increasing as the valve seat hole extends from the tube fitting hole to the gas inlet;

a valve stem arranged in a gas passage defined in the valve body between the gas inlet and the valve seat hole to extend through the valve seat hole while being movable along the gas passage, the valve stem having a cross-section conforming to the cross-section of the valve seat hole;

a pressing protrusion extending from one end of the valve stem into the tube fitting hole; and

a spring arranged in the gas passage to elastically support the other end of the valve stem.

3. The chest of cinerary urns according to claim 1, further comprising:

steps each formed at an inner surface of an associated one of the valve mounting members; and

micro filters each arranged in an associated one of the valve mounting members such that the micro filter is interposed between an associated one of the steps and an associated one of the inlet members.

4. The chest of cinerary urns according to claim 1 or 3, further comprising:

safety valves each mounted to an associated one of the valve mounting members such that the safety valve communicates with the interior of the associated valve mounting member.

5. The chest of cinerary urns according to claim 1, wherein:

each of the cover plate is opened at a central portion thereof, and provided with a transparent member attached to the central portion.

6. The chest of cinerary urns according to claim 1, further comprising:

injection hoses each connected, at one end thereof, to an associated one of the inlet members while being connected, at the other end thereof, to an associated one of the valve mounting members.

7. The chest of cinerary urns according to claim 1, further comprising:

injection hoses each connected, at one end thereof, to an associated one of the inlet members;

a distribution tube commonly connected to respective other ends of the injection hoses; and

a valve mounting member connected to the distribution tube, and provided with the injection valve.

8. The chest of cinerary urns according to claim 1 or 5, further comprising:

pressure gauges each mounted to an associated one of the cover plates or transparent members.

9. A cinerary urn chest comprising a chest body having an urn receiving space being open at a front side thereof to allow a cinerary urn to be placed in the urn receiving space, the cinerary urn storing cremated remains, and a cover plate detachably attached to the chest body at a position corresponding to the urn receiving space to cover the front side of the urn receiving space, the chest further comprising:

a seal member interposed between a portion of the chest body around the urn receiving space and the cover plate;

a hollow inlet member protruded from a portion of a rear wall of the chest body while communicating with the urn receiving space;

a valve mounting member coupled to the inlet member; and

an injection valve fitted in the valve mounting member, and centrally provided with an injection hole to allow gas to be injected through the injection hole into the inlet member;

wherein the injection valve comprising:

a hollow valve body tightly fitted in the valve mounting member, the valve body being provided, at one side thereof, with a tube fitting hole while being provided, at the other side thereof, with a gas inlet communicating with the inlet member;

a valve seat hole formed at the valve body between the tube fitting hole and the gas inlet, the valve seat hole having a frustoconical cross-section having an area gradually increasing as the valve seat hole extends from the tube fitting hole to the gas inlet;

a valve stem arranged in a gas passage defined in the valve body between the gas inlet and the valve seat hole to extend through the valve seat hole while being movable along the gas passage, the valve stem having a cross-section conforming to the cross-section of the valve seat

hole;

a pressing protrusion extending from one end of the valve stem into the tube fitting hole; and

a spring arranged in the gas passage to elastically support the other end of the valve stem.

11. The cinerary urn chest according to claim 9, further comprising:

a step formed at an inner surface of the valve mounting member; and

a micro filter arranged in the valve mounting member such that the micro filter is interposed between the step and the inlet member.

12. The cinerary urn chest according to claim 9 or 11, further comprising:

a safety valve mounted to the valve mounting member such that the safety valve communicates with the interior of the valve mounting member.

13. The cinerary urn chest according to claim 9, wherein:

the cover plate is opened at a central portion thereof, and provided with a transparent member attached to the central portion.

14. The cinerary urn chest according to claim 9, wherein the chest body is provided, at outer surfaces of opposing walls thereof, with a plurality of engagement protrusions and a plurality of engagement grooves corresponding to the engagement protrusions, respectively.

15. The cinerary urn chest according to claim 9 or 13, further comprising:

a pressure gauge mounted to the cover plate or transparent member.